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December 16, 2016

***Toxic Stress Toolkit for Pediatric Healthcare Providers in Rhode Island***  
**Executive Summary**

The Rhode Island Department of Health (RIDOH), Bradley Hasbro Children's Research Center, and the Rhode Island Chapter of the American Academy of Pediatrics (RIAAP), have worked closely with experts in child health, infant mental health, and early childhood programs, to:

- Develop a guide for primary care pediatricians to identify risk factors for Toxic Stress in young children and their families
- Assemble a list of resources available in Rhode Island to support children and families with risk factors for or who are experiencing Toxic Stress

This toolkit includes an overview of the concepts related to Toxic Stress, practical resources to assist the pediatric primary care practice choosing to screen for Toxic Stress, and information about a new online resource directory containing services and supports that can address needs identified through screening. An electronic copy of the toolkit can be accessed on the Rhode Island Department of Health website at [http://health.ri.gov/programs/detail.php?pgm\\_id=1075](http://health.ri.gov/programs/detail.php?pgm_id=1075)

**Background**

There is a large body of literature demonstrating the long-term negative health effects of experiencing significant adversity and stress during childhood. Adverse childhood experiences (ACEs), such as abuse, neglect, household presence of mental health problems, domestic violence, substance use, divorce, or incarceration of relatives, can increase the risk for health problems and diseases throughout the life-course.

Toxic stress describes the physical changes in the brain and other organ systems that result from prolonged and significant adverse childhood experiences. During critical periods in early childhood brain development, stress that is frequent, severe, and prolonged can impair the structure and function of neurons. The alteration in neurons prevents the establishment of connections between these cells that are essential for healthy development, memory and learning, and emotional regulation.

The presence of safe and stable relationships with caring and nurturing adults can mitigate the effects of significant stress on young children and prevent toxic stress from occurring. There are evidence-based strategies and best practices for alleviating household stress and promoting strong bonds between children and caregivers which can also reduce the impact of trauma.



## Risk Factors and Indicators

There are many sources of data on the types of stressors and adverse experiences affecting the children of Rhode Island. The most recent *National Survey of Children's Health* (2011-2012), found that nearly 25% of the state's children have experienced two or more ACEs (as reported by their parents) (Table 1). More recent data from RIDOH indicate that in 2015, 9.8% of Rhode Island newborns were considered to be at highest risk for poor developmental outcomes (three or more risk factors identified at birth). Additionally, Rhode Island KIDS COUNT releases a yearly fact book that is a compilation of various data sources which includes many indicators of childhood well-being (<http://www.rikidscount.org/DataPublications/RIKidsCountFactbook.aspx>). These data indicate that there are a significant number of young children in Rhode Island experiencing adversity and are at risk for developing the negative effects of Toxic Stress.

<b>Table 1. ACEs in Rhode Island: National Survey of Children's Health 2011-2012</b>	
<b>≥ 1 Adverse Childhood Experience</b>	<b>48%</b>
<b>≥ 2 Adverse Childhood Experiences</b>	<b>23%</b>
<b>Socioeconomic hardship</b>	29%
<b>Parental separation/Divorce</b>	19%
<b>Household drug or alcohol problem</b>	12%
<b>Household mental illness</b>	11%
<b>Victim/Witness of neighborhood violence</b>	9%
<b>Witness domestic violence</b>	7%
<b>Parental incarceration</b>	5%
<b>Experienced racial prejudice</b>	3%
<b>Death of a parent</b>	3%

## Screening

There are several challenges to screening for Toxic Stress in the pediatric primary care setting. There are currently no professional guidelines regarding optimal timing or intervals for Toxic Stress screening. Many tools and questionnaires exist that relate to risk factors for Toxic Stress, but few are validated screening tools. Family and child strengths and protective factors are not addressed by many existing risk factor questionnaires. Toxic Stress screening is not included in the most current *Bright Futures* guidelines for pediatric preventive care and so is not universally reimbursed by insurers.

The *Toxic Stress Toolkit for Pediatric Healthcare Providers in Rhode Island* was developed in anticipation that professional guidelines and recommendations for screening for child and family adversity are likely to be developed in the next couple of years. The toolkit was created to serve as a resource for the busy pediatric healthcare professional and provide a concise overview of Toxic Stress and related early brain science, related risk factor screening recommendations from the American Academy of Pediatrics, and tools to assist practices interested in implementing Toxic Stress screening.



## Response to Screening

For professionals who screen children and families for Toxic Stress, the toolkit highlights resources for office-based approaches for providing guidance to families on fostering healthy early brain development in young children. For those children and families who need more intensive support, it is critical to have a directory of current information on available resources. A comprehensive list of Rhode Island's child health and related community resources is now maintained on the Medical Home Portal at: <https://www.medicalhomeportal.org/>. This website is designed to assist both caregivers and professionals with care coordination.

Addressing Toxic Stress in Rhode Island is the collective responsibility of many stakeholders. There is a role for state government in policy making and funding; for public health in surveillance and supporting the implementation of best practices; for healthcare in screening, anticipatory guidance, referral, and treatment; for education in providing academic and social supports; for municipalities and communities in civic engagement and addressing community level stressors; for law enforcement in curbing neighborhood violence and incorporating trauma-informed approaches within the criminal justice system; for philanthropy in funding services to support basic needs and research into best practices for prevention and treatment.

Early life experiences are critically important. However, these experiences do not define destiny. Toxic Stress is not permanent or immutable. Young children have high levels of developmental plasticity and opportunities for resilient developmental trajectories are optimized when appropriate supports are provided as early as possible. The body of knowledge on identifying and treating Toxic Stress is increasing. More work needs to be done on determining effective ways of increasing and supporting family and child resilience utilizing family-centered multi-generational approaches and employing evidence-based practices that have shown positive outcomes. This toolkit for pediatric providers offers a framework for screening and response that can be updated in the future as new science and innovative approaches emerge.

